



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2023-0162; Project Identifier MCAI-2022-01559-G; Amendment 39-22335; AD 2023-03-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Schempp-Hirth Flugzeugbau GmbH Gliders**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all Schempp-Hirth Flugzeugbau GmbH Model Duo Discus and Duo Discus T gliders. This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as cracks in the connecting tube of the elevator U-bracket of the horizontal tail, which could compromise the stiffness of the elevator control system and of the attachment of the horizontal tail. This AD requires repetitively inspecting the elevator U-bracket for cracks and broken weld seams, the rear connection between the horizontal tail and the rear attachment on the fuselage for play and softness, and the foam support for compression between the vertical and horizontal tail, and replacing or repairing damaged parts as applicable. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

*AD Docket:* You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0162; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The street address for Docket Operations is listed above.

*Material Incorporated by Reference:*

- For service information identified in this final rule, contact Schempp-Hirth, Krehenstrasse 25, Kirchheim unter Teck, Germany; phone: +49 7021 7298-0; email: [info@schempp-hirth.com](mailto:info@schempp-hirth.com); website: [schempp-hirth.com](https://www.schempp-hirth.com). You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0162.

**FOR FURTHER INFORMATION CONTACT:** Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; email: [jim.rutherford@faa.gov](mailto:jim.rutherford@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2023-0162; Project Identifier MCAI-2022-01559-G” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

## **Background**

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD 2022-0242-E, dated December 7, 2022 (referred to after this as “the MCAI”), to correct an unsafe condition on all Schempp-Hirth Flugzeugbau GmbH Model Arcus, Duo Discus, Duo Discus C, Nimbus-4, Nimbus-4D, Arcus M, Arcus T, Duo Discus T, Nimbus-4M, Nimbus-4T, Nimbus-4DM, and Nimbus-4DT gliders. The MCAI states that instances have been reported of finding cracks in the connecting tube of the elevator U-bracket of the horizontal tail of certain gliders. The MCAI requires a one-time inspection of the elevator U-bracket and the rear connection between the horizontal tail and the rear attachment on the fuselage for damage and repair or replacement of damaged parts as applicable. The MCAI also requires amendment of the glider’s applicable aircraft flight manual (AFM).

This condition, if not detected and corrected, could lead to failure of the elevator control system, loss of the horizontal tail attachment, and consequent loss of glider control. You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0162.

## **Related Service Information under 1 CFR Part 51**

The FAA reviewed Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document), which specifies procedures for inspecting the elevator U-bracket and the rear connection between the horizontal tail and the rear attachment on the fuselage for damage and repairing or replacing damaged parts.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

## **FAA’s Determination**

These products have been approved by the aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA’s bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe

condition described in the MCAI and service information described above. The FAA is issuing this AD after determining that the unsafe condition described previously is likely to exist or develop on other products of these same type designs.

### **AD Requirements**

This AD requires accomplishing the actions specified in the MCAI, except as discussed under “Differences Between this AD and the MCAI.”

### **Differences Between this AD and the MCAI**

The MCAI applies to Schempp-Hirth Flugzeugbau GmbH Model Arcus, Duo Discus C, Nimbus-4, Nimbus-4D, Arcus M, Arcus T, Nimbus-4M, Nimbus-4T, Nimbus-4DM, and Nimbus-4DT gliders, and this AD does not because those models do not have an FAA type certificate.

The MCAI requires the incorporation of revisions to the flight manual that would instruct the pilot to inspect the horizontal tail and elevator U-bracket during each pre-flight walk-around. In the MCAI, a licensed mechanic performs the inspection required for those gliders with 1,000 or more hours time-in-service (TIS) on the elevator U-bracket as of the effective date of the MCAI. Thereafter a pilot performs this inspection during the pre-flight walk-around. For those gliders with less than 1,000 hours TIS on the elevator U-bracket as of the effective date of the MCAI, the MCAI relies solely on the pilot to perform the inspection during the pre-flight walk-around. Since the FAA regulations do not allow a pilot to perform this type of inspection, this AD will require the inspection to be performed by a licensed mechanic for all gliders before further flight and thereafter at 12-month intervals.

### **Justification for Immediate Adoption and Determination of the Effective Date**

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for “good cause,” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies foregoing notice and comment prior to adoption of this rule because damage in the elevator U-bracket or the rear connection between the horizontal tail and the rear attachment on the fuselage could happen without advanced warning and result in failure of the elevator control system, loss of the horizontal tail attachment, and consequent loss of glider control. Therefore, the inspection and any necessary replacement or repair must be accomplished before further flight. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b)(3)(B).

In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forego notice and comment.

#### **Regulatory Flexibility Act**

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

#### **Costs of Compliance**

The FAA estimates that this AD affects 31 gliders of U.S. registry.

The FAA estimates the following costs to comply with this AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspect elevator U-bracket	4 work-hours x \$85 per hour = \$340	Not Applicable	\$340 per inspection cycle	\$10,540 per inspection cycle
Inspect horizontal tail attachment	2 work-hours x \$85 per hour = \$170	Not Applicable	\$170 per inspection cycle	\$5,270 per inspection cycle
Inspect foam compression	1 work-hour x \$85 per hour = \$85	Not Applicable	\$85 per inspection cycle	\$2,635 per inspection cycle

The FAA estimates the following costs to do any necessary replacement that would be required based on the results of the inspection. The agency has no data to determine the number of gliders that might need this replacement:

**On-condition costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>
Replace elevator U-bracket	2 work-hours x \$85 per hour = \$170	\$500	\$670
Replace foam	2 work-hours x \$85 per hour = \$170	\$100	\$270

Since the repair instructions for the horizontal tail attachment could vary significantly from glider to glider if discrepancies are found during the inspection, the FAA has no data to determine the number of gliders that would need follow-on actions or what the cost per glider would be.

**Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

**Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

**PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2023-03-10 Schempp-Hirth Flugzeugbau GmbH:** Amendment 39-22335; Docket No. FAA-2023-0162; Project Identifier MCAI-2022-01559-G.

**(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Schempp-Hirth Flugzeugbau GmbH Model Duo Discus and Duo Discus T gliders, all serial numbers, certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 2730, Elevator Control System.

**(e) Unsafe Condition**

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as cracks in the connecting tube of the elevator U-bracket of the horizontal tail, which could



compromise the stiffness of the elevator control system and of the attachment of the horizontal tail. The FAA is issuing this AD to address this condition. The unsafe condition, if not addressed, could result in failure of the elevator control system, loss of the horizontal tail attachment, and consequent loss of glider control.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) Before further flight after the effective date of this AD and thereafter at intervals not to exceed 12 months, inspect the elevator U-bracket for indications of cracking by following paragraphs 1.a) and 1.b) of Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document). For the purposes of this AD, indications of cracking include elastic and permanent twisting.

Note 1 to paragraph (g)(1): Technical Note Schempp-Hirth Flugzeugbau GmbH Technical Note 396-22; and Schempp-Hirth Flugzeugbau GmbH Technical Note 890-18; both Revision 1; both dated October 13, 2022, contain information related to this AD.

Note 2 to paragraph (g)(1): This service information contains German to English translation. The European Union Aviation Safety Agency (EASA) used the English translation in referencing the document from Schempp-Hirth Flugzeugbau GmbH. For enforceability purposes, the FAA will refer to the Schempp-Hirth Flugzeugbau GmbH service information in English as it appears on the document.

(i) If indications of cracking are present, remove the elevator U-bracket and inspect it for any crack and broken weld seam by following paragraph 1.c) of Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document).

(ii) If no indications of cracking are present and you do not have suitable tools such as a mirror, flashlight, borescope, or equivalent to do the inspection required in paragraph (g)(1)(i) of this AD, remove the elevator U-bracket and inspect for any crack and broken weld seam by following paragraph 1.c) of Schempp-Hirth Flugzeugbau GmbH Working

Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document).

(iii) If no indications of cracking are present and you have suitable tools such as a mirror, flashlight, borescope, or equivalent to do the inspection required in paragraph (g)(1)(i) of this AD, inspect the elevator U-bracket for any crack and broken weld seam by following paragraph 1.c) of Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document). This inspection may be done without removing the elevator U-bracket.

(2) If during any inspection as required by paragraph (g)(1) of this AD, there is any crack or broken weld seam in the elevator U-bracket, before further flight, replace the elevator U-bracket by following paragraph 1.d) of Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document).

(3) Before further flight after completing the actions in paragraph (g)(1) and (2) of this AD, as applicable, and thereafter at intervals not to exceed 12 months, rig the horizontal tail on the fin by following paragraph 1.d) of the Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document).

(4) Before further flight after completing the action in paragraph (g)(3) of this AD, and thereafter at intervals not to exceed 12 months, inspect for softness and play in the rear connection between the horizontal tail and the rear attachment on the fuselage by following paragraph 1.d) of Schempp-Hirth Flugzeugbau GmbH Working Instructions

Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document). If there is softness or play, before further flight, do the applicable corrective actions by following paragraph 1.d) of the Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document). Where the service information specifies contacting Schempp-Hirth Flugzeugbau GmbH for a repair, instead use a method approved by the Manager, International Validation Branch,

FAA; EASA; or Schempp-Hirth Flugzeugbau GmbH's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(5) Before further flight after completing the action in paragraph (g)(4) of this AD, and thereafter at intervals not to exceed 12 months, inspect the foam support for compression between the vertical and horizontal tail by following paragraph 1.d) of Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document). If the foam support has settled to the point that it cannot be further compressed, it must be replaced before further flight.

**(h) Special Flight Permits**

Special flight permits are prohibited.

**(i) Alternative Methods of Compliance (AMOCs)**

The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in § 39.19. In accordance with § 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (j)(2) of this AD or email to: 9-AVS-AIR-730-AMOC@faa.gov. If mailing information, also submit information by email. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Additional Information**

(1) Refer to EASA Emergency AD 2022-0242-E, dated December 7, 2022, for related information. This EASA Emergency AD may be found in the AD docket at regulations.gov under Docket No. FAA-2023-0162.

(2) For more information about this AD, contact Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; email: jim.rutherford@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (4) of this AD.

**(k) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Schempp-Hirth Flugzeugbau GmbH Working Instructions Technical Note 396-22, 380-3, 868-24, 890-18, A532-10, Revision 0, dated February 28, 2022 (issued as one document).

Note 1 to paragraph (k)(1)(i): This service information contains German to English translation. EASA used the English translation in referencing the document from Schempp-Hirth Flugzeugbau GmbH. For enforceability purposes, the FAA will refer to the Schempp-Hirth Flugzeugbau GmbH service information in English as it appears on the document.

(ii) [Reserved]

(3) For service information identified in this AD, contact Schempp-Hirth, Krehenstrasse 25, Kirchheim unter Teck, Germany; phone: +49 7021 7298-0; email: [info@schempp-hirth.com](mailto:info@schempp-hirth.com); website: [schempp-hirth.com](http://schempp-hirth.com).

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: [www.archives.gov/federal-register/cfr/ibr-locations.html](http://www.archives.gov/federal-register/cfr/ibr-locations.html).

Issued on February 3, 2023.

Christina Underwood, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2023-02773 Filed: 2/8/2023 8:45 am; Publication Date: 2/9/2023]